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GENTLEMEN,—As the spokesman, for the nonce, of the Medical Faculty of this College, my first duty is to give you all a hearty welcome; not less to you, old friends, who, mindful of the happy associations of former years, grace these proceedings by your presence, nor you who are the actual participators of our current labours, than to you, young scions of a hopeful race, who are, here and now, to be engrafted upon an ancient and honourable stock. It is, indeed, to celebrate your initiation into the medical profession that we are chiefly gathered together; and custom has prescribed, and good fellowship enjoins, that the occasion should not be allowed to pass without our giving you the assurance that you have here friends to greet you, hands to help you, and willing hearts to serve you. Let me, then, congratulate you on the choice you have made of the profession of medicine as the sphere of your labours, and of this College as the place of your studies.

Whatever may have been the considerations which have led you to enter the medical profession—whether the accident of birth, social relationships and family ties, or the exercise of a deliberate choice—it is not likely that you and your friends have selected this college without some thought and inquiry. This circumstance might seem to render it unnecessary for me to attempt to add strength to your convictions; but I cannot forbear from dwelling upon some of the special advantages which I believe will accrue to you from studying in this place. No vindication is needed of the general scope and character of the education that University College affords. The continued and unvaried success of half a century is a sufficient testimony to its efficacy and its worth. Scarcely a city, town, or village throughout the British Empire but cherishes one or more of her sons. They sit in seats of honour in high places; Royalty calls in their aid; the State avails itself of their knowledge and acumen; Science applauds their genius; Learned Societies award them enviable honours; and Schools of Learning accept their co-operation with delight. The practical sagacity and the true political insight of the founders of this College, the energy and enthusiasm of our predecessors, and the enlightened enterprise of our executive body, have furnished many of the elements of our success. Our museums, laboratories, class-rooms, and libraries, afford facilities of observation, study, and research, which in their entirety are unsurpassed by those of any medical college in the world. Our hospital has supplied the material of the public experience of some of the greatest teachers and practitioners of this age. It has been the scene of the clinical and scientific achievements of Elliotson, of Anthony Todd Thomson, of Robert Carswell, and of Samuel Cooper; and, among those, happily, still living, of C. J. B. Williams, of Walshe, of Jenner, and of Reynolds; of Richard Quain, of Erichsen, of Henry Thompson, and of Wharton Jones. Here, too, Liston performed those marvellous feats of surgical skill and daring that made him the wonder and delight of his contemporaries, the envy and despair of his successors. But it is not only in the practical departments of medicine and surgery that University College has been renowned. From this college and hospital have emanated some of the most famous and permanent contributions to medical literature. The comprehensive Surgical Dictionary of Samuel Cooper, the classical treatise of Erichsen on the Science and Art of Surgery, that fund of clinical record blended with philosophical reflection in Walshe's works on Diseases of the Heart and the Lungs, and Quain's copious and authoritative text-book of Anatomy, had their birth and have received most of their nurture within this fold. Nor have we been behindhand in the higher departments of scientific thought and investigation. This college has, from its very foundation, been distinguished from most other medical schools by the plan and method of its studies. Its guiding principle has been to teach by great authorities, by specialists and experts in their particular departments of learning. This has given to its teaching a thoroughness, reality, and dignity that have enabled a large proportion of its pupils not only to excel as practitioners, but also to attain distinction as students of science. Nor have these results been casual or fortuitous; they have been, rather, the anticipated culmination of a sagacious and well-regulated system.

There is a collateral advantage, amounting almost to a privilege, which the medical student in this college may enjoy. This institution is not a medical school only; it is a large educational establishment, embracing also the Faculties of Science and Arts, and employing the services of men eminent in every department of thought. Its range of studies is therefore wide and encyclopædic, and exhibits many of the social and intellectual characteristics of a university. Though a student cannot, of course, pursue every subject that is open to him, even in his own Faculty, and still less in other Faculties, he cannot fail to be a gainer by living among those who represent the entire circle of knowledge. He breathes an intellectual air, and profits by traditions which are independent of particular teachers. Though the relationships between the students in the medical and other faculties have not always been so close and so harmonious as might have been wished, there are real and substantial benefits to be gained by a freer intercourse and a closer intercommunication. In the Faculties of Science, and of Arts and Law, you will find many earnest and anxious toilers after truth, who are doubtless destined to take high places among the thinkers and the workers of the immediate future; and it is to your intellectual and moral advantage, to say nothing of your social interest, to make the acquaintance of such, and to grow up in friendly communion with them.

Though I have given precedence to your connexion with University College, I would not have you suppose that I regard this as the permanent order of relative importance. While I wish you to cherish sentiments of affection and loyalty to this college, I am not so devoid of the sense of relativity as to place this institution in the forefront of your thoughts. It is Medicine, its aims and aspirations, that is to be the absorbing passion of your lives. You are to be medical men first, and University College men afterwards. To this end it is necessary that you should have clear notions of what Medicine is, in order that you may comprehend its character, be faithful to its traditions, and zealous for its honour and advancement.

What, then, is Medicine? To most of you it may at present seem enough to call it the art of diagnosing disease and prescribing remedies. It is this; but it is something more. Medicine is essentially the Science of Health. So long as the idea of medicine was limited to the study and treatment of disease, its progress was slow and uncertain, and its place in the hierarchy of intellectual pursuits doubtful and ill-defined. Now, however, the medical profession would still retain the most important part of its duties, and all, or more than all, its present share of honours, if every drug in the Pharmacopœia were to become extinct. The credulous faith in the efficacy of drugs is, and always has been, the secret of the success of every form of charlatanism. Medicine, then, being not merely the art of healing, but the science of life in its organic relations, the duty of studying and investigating the phenomena and conditions of health becomes paramount. It was the recognition of this truth that raised Hippocrates and his school out of the region of mere empiricism. Before his time, medicine in Greece had been cultivated in the priestly schools of the Asclepiadæ, and had remained a mere technical craft, based upon hereditary experience. But Herodicus, who is said to have instructed Hippocrates in the use of gymnastics in the treatment of diseases, sought to fix the rules of a scientific promotion of health. Inquiry was instituted into the influence of various nutriments and ways of life, and thus was created a new art, which had reference, not to the treatment of particular diseases, but rather to the invigoration and preservation of the human organism as a whole. The efforts of Hippocrates and his followers were, however, rather to promote the health of individuals, whereas the aim of modern medicine is, in addition, to conserve and protect the health of communities. Imagine the condition of a large city like London, with four millions of persons congregated upon the comparatively small area of a hundred and twenty square miles, without the sanitary and other resources which medical science has bestowed upon civilisation! What a light has hygiene thrown upon the relations existing between the character of the soil, drainage, light, ventilation, food, water, clothing, and occupation, and the origin and spread of disease! Consumption, pneumonia, typhus and typhoid fevers, various epidemic and endemic diseases, malaria, dysentery, gout, and paralyses of many forms, are now known to depend upon preventable physical conditions. Small-pox, which up to the beginning of the present century inflicted such ravages, and even now makes frightful havoc upon unprotected communities, has been rendered practically eradicable by the means of vaccination. Cholera, as we have lately had experience, has not for us the terrors which it had for our fathers; its conditions have been ascertained, its secret discovered, and its malignancy disarmed. The experimental investigations of pathologists—and among them those of our Holme Professor of Clinical Medicine, Dr. Wilson Fox, have an honoured place,—aided by the beautiful microscopical researches of Koch, are elucidating the causes and origin of consumption, and have already kindled eager hopes of its effectual prevention.

The scope of medicine is therefore far-reaching, and in order to comprehend the whole science of medicine in the sense just defined, as the art of treating disease and the science of health, it is necessary to premise the study of the natural behaviour of living matter—that is, Physiology. Strange as it may appear to uninitiated minds, the grandest discovery and generalisation of modern medicine is that disease is healthy action gone wrong, or, as Mr. John Simon has described it, "Pathology consists in the science of life under other conditions than those of ideal perfection." Physiology is therefore the true foundation of medicine. This may seem heterodoxy to those who have been brought up under the influence of the older doctrine that anatomy is the basis of medicine. True; anatomy is indispensable to the study of physiology; but anatomy is notoriously incapable of solving the simplest biological problem. Dr. Daremberg, in his learned history of the medical sciences, has observed that an examination of the history of medicine shows that the fate of pathology is bound up, scientifically and historically, with the fate of physiology; and that anatomy has not only at all times failed to reform physiology, but that ancient physiology, which was for the most part only a tissue of *a priori* speculations, has not unfrequently contributed to corrupt anatomy. Modern physiology has, however, amended itself by the experimental method, and henceforth is not likely either to miss its own way or to allow anatomy to go astray. On the contrary, it has opened up for anatomy new paths, and has, at the same time, furnished more solid bases of support for the reform of pathology. Do not mistake my meaning. I do not wish to say anything that can in the smallest degree be construed as depreciating the *absolute* value of anatomy. I merely protest that its *relative* rank needs to be readjusted. Anatomy is of primary importance to the study and practice of medicine; it is the very A B C, without which no real progress can be made. As without an acquaintance with the alphabet there can be no literary culture, so without anatomy there can be no medical attainments. Were it not for this, and for the help which a knowledge of topographical anatomy renders to the operating surgeon, the educational value of human anatomy, consisting as it does almost exclusively of the observation and remembrance of unrelated facts, would be extremely small, while its utility as a means of intellectual culture is absolutely *nil*. It is only when anatomy takes on a synthetic character, and becomes comparative in its method, that it first assumes the quality of a science. Nevertheless, anatomy is indispensable in a medical education, and to be of any service it must be almost exclusively practical. Now, practical anatomy means dissection, and this study is, to a beginner, revolting and disgusting. No man of nice feeling can at first take any pleasure in dissecting a human corpse. To remain unmoved in the presence of death indicates a callous rather than a courageous disposition. I envy not that man who enters a dissecting-room for the first time without an "inward horror." Men who have afterwards become enamoured of anatomy and acquired authority in it have recorded their first repugnance to dissection. Aristotle, the founder of comparative anatomy, and who is said to have dissected as many as five hundred different kinds of animals with his own hands, expresses the repugnance that he felt at the sight of the primordia of the human body. Haller observes that "the nature of death impresses us with horror, and that there is nothing sadder than a deadhouse." George Henry Lewes, distinguished alike as an anatomist, physiologist, and philosopher, has eloquently described the repugnance which human dissection creates, and the fascination by which it can alone be suppressed. "The fascination must," he says, "be strong, for the disgust is powerful. Our senses are affected by the sickening scent of a corrupting body, by the painful sight of bloodstained instruments, and the scattered shreds of a dismembered corpse. There is also a deeper moral disgust, peculiarly affecting to imaginative minds. The spectacle of death is always accompanied by a certain awe. At the bedside or on the battlefield no gazer remains unmoved ; pity, and a sense of community in death, steal over every mind when unshaken by violent emotions. How much more painful the dissecting-room, where the corpse is untended by affection, and unpitied by strangers! none of the sanctity of death surrounds it; none of the tenderness of love watches over it; none of the ceremonials of respect defend it. There it lies, naked, and alien alike from affection and respect, flung upon the table in oblivious disregard of its having once been the temple of a human life. It is no longer that temple; it is not even a corpse; it has become a *subject*. Yet all these sources of repulsion have been, and daily are, overcome. Men sit patiently for many hours, inhaling the nauseous odours, exploring with their scalpel the winding intricacies of vein and nerve, steadfast, patient, victorious. They have suppressed the suggestions of the scene by firmly fixing their minds on the object of their task. It is not because their sensibilities have become obtuse, but because their power of abstraction has overcome the solicitations of suggestion. They have not become hardened; they have simply learned to concentrate their thoughts upon a definite pursuit. Were it not for this we might wonder that men did not consent to remain for ever unenlightened on the marvels of their organisation, rather than acquire the knowledge by so repulsive a route." But when the prejudice against anatomy is finally overcome by the passion for knowledge it even intensifies the finer sensibilities of our nature. Bossuet, of whom it has been said, "he is not so much a man as a human nature with the temperance of a saint, the justice of a bishop, the prudence of a doctor, and the might of a great spirit"—Bossuet, with all his delicate and tender sympathies for everything that was pure, noble, and refined, was not repelled from the study of anatomy, and even wrote a tractate upon it; and Goethe, though a practised anatomist, could not look upon the body of Schiller dead.

While anatomy furnishes the material substratum of physiology, there are other studies equally necessary in the investigation of the phenomena of living matter. Botany and chemistry are only second in importance to anatomy;

and though it is the fashion nowadays to decry botany and to advocate its abolition from medical studies, I entertain a very strong opinion that in the whole range of natural science there is no subject so well adapted for initiating a student into the Inductive Method. It encourages observation, it affords the opportunities of generalisation, and, at a very small expenditure of time and money, enables the student to gain an insight, pure and experimental, into the operations of living matter. Standing, as it does, midway between the animal and mineral worlds, botany, it has been observed, indicates their relation to each other, and at different points touches the confines of both. It throws great light on the functions of nutrition, and on the laws of development; while from the marked analogy between animals and vegetables, there is every reason to hope that its further progress, assisted by that of electricity, will prepare the way for a comprehensive theory of life to which the resources of our knowledge are still unequal, but towards which the movements of modern science are manifestly tending. Botany, it is true, may not now be of the same technical value to the practitioner as formerly, but its educational value to the student has correspondingly increased. It will be an evil day for medicine when all its studies are regulated only by considerations of utility. This word "utility" is the bane of modern education. It is tending to eliminate all culture from scientific pursuits. It is an *ignis fatuus* that is leading us into a bog of stolid dulness. Those who cannot see any relation between a liberal education and the requirements of practical life are constantly clamouring for the substitution of technical instruction for classical and literary studies. The pernicious influences of the doctrine of utilitarianism have not, perhaps, made such havoc in England as they have in America, but they threaten sooner or later to confound us. Over fifty years ago Longfellow raised an eloquent protest against the absorbing utilitarianism of the age. "With us," he says, "the spirit of the age is clamorous for utility; for visible, tangible, utility; for bare, brawny, muscular utility. We would be roused to action by the voice of the populace and the sounds of the crowded mart, and not 'lulled asleep in shady idleness with poets' pastimes.' We are swallowed up in schemes for gain, and engrossed in contrivances for bodily enjoyment, ... as if this particle of dust were immortal, as if the soul needed no aliment, and the mind no raiment." We too often limit the application of the word *utility* to those acquisitions and pursuits which are of immediate and visible profit to ourselves and the community, regarding as comparatively or utterly useless many others which, though more remote in their effects and more imperceptible in their operation, are, notwithstanding, higher in their aim, wider in their influence, more certain in their results, and more intimately connected with the common weal. "The word 'utility,'" continues Longfellow, "has a wider signification than this; it embraces in its proper definition whatever contributes to our happiness, and thus includes many of those arts and sciences, many of those secret studies and solitary avocations, which are generally regarded as useless or as absolutely injurious to society. Not he alone does service to the State whose wisdom guides her councils at home, nor he whose voice asserts her dignity abroad. A thousand little rills springing up in the retired walks of life go to swell the rushing tide of national glory and prosperity; and whoever in the solitude of his chamber, and by even a single effort of his mind, has added to the intellectual pre-eminence of his country, has not lived in vain, nor to himself alone." In the medical profession, the greatest and the best have usually been the most cultured and the least tainted by this spirit of utilitarianism. Hippocrates, Galen, Linacre, Boerhaave, Haller, Mead, Freind, Francis Adams, and Daremberg were all scholars; and even among the men of the greatest practical skill, not a few have been distinguished by their attainments in elegant and polite learning.

As to the way in which you are to pursue your studies, there is little for me to say. Of advice you have no doubt already had as much as you care for, and despite any suggestions or recommendations I might make, you are more likely to fall in with the traditions of the place, and with the practices of your fellows, than with any theories of mine. But take care that the traditions you follow are the best traditions. Do not forget that diligence and industry will make up for many intellectual imperfections. Remember, too, that your organisation is multiplex, and that you need to train your senses, your understanding, and your reason, and have all your faculties under the governance of a resolute and vigorous will. "All our knowledge," says Kant, "starts from the Senses, goes on from them to the Understanding, and ends with Reason, than which nothing higher is found in us, either to work up the material which we derive from the intuitions of sense, or to evolve the highest unity of thought." To be, then, useful and accomplished men, it is necessary for you to engage in those exercises which will train your external senses, cultivate your understanding, and refine and ennoble your reason. The medical curriculum embraces studies adapted to each and all these purposes. What they are and how they are to be pursued, I will not now stop to explain. But a caution is needed. There are two extremes to be avoided; almost equally dangerous, though in different ways—working too much is nearly as bad as working too little; perhaps of the two the more grievous damage is done by excess. An idle and desultory student may, by resolute application, do something to redeem the follies of the past; but a student who, through misguided zeal, or over-anxiety, or from fear, has lavished his strength too prodigally on his task, to the neglect of his physical well-being, may find too late his forces undermined and his energies consumed. Regulate, then, your hours of work, and study so that you may have ample leisure for the needs of recuperation, recreation, and refinement. Learn the secret of losing time rationally. Literature, music, the drama, the fine arts, and the society of persons of refined, though simple, tastes afford abundant opportunities for instruction and amusement and facilities for the best æsthetic culture. Outdoor exercises, as walking, boating, cricket, Volunteering—whether you enlist in the service of Mars or in that of Hygeia, to shoulder the rifle or attend the ambulance—will invigorate your body, refresh your mind, and repair the damage your growing frame sustains in the noxious atmosphere of hospital, laboratory, and dissecting-room. These exercises, too, supply the only opportunities of witnessing and admiring the natural beauty of earth and sky and sea; the variegated hues of gem and flower; the painting of insect, bird, and beast; the brightness of sunshine, the iridescence of the rainbow, the rippling of shallow streams, the sheen of still water, the flash and roar of storm and tempest. A memory plenished from the storehouse of poet and philosopher, artist and orator, novelist, historian, and divine; a mind that gives "to forms and images a breath and everlasting motion;" "an eye made quiet by the power of harmony and the deep power of joy" will soothe the tired brain, bring solace to the careworn heart, brace the unstrung nerves, and lighten the weary tread. Cultivate the habit of wishing to discover the Good and the Beautiful in all that meets and surrounds you; the disposition that

> "Finds tongues in trees, books in the running brooks,
> Sermons in stones, and good in everything."

Gentlemen, no education should be exclusively technical or even intellectual, and certainly not that of a medical man. Hippocrates gave ethical dignity to medical practice. No one showed more respect than he for patients, more solicitude for their welfare, or at least for their solace and consolation. No one has ever had a more correct appreciation of the relations which should exist between medical men themselves and between the medical practitioner and his patient and the public. Guy of Chauliac, who flourished in the middle of the fourteenth century, was equally exalted in his ideals. "A surgeon," he says, "should be learned, expert, ingenious, and well mannered; he should be bold when sure, cautious in danger; kind to patients, gracious to colleagues, modest in giving an opinion; chaste, sober, pitiful, and merciful, and not greedy of gain." These are noble teachings, which each of us may follow, however haltingly and afar off. Whatever may be our ideals, they have only moral value when they amend our lives. Grave deep upon your hearts the moral maxims of the master mind of medicine, and of the illuminator of modern philosophy. "With purity and with holiness I will pass my life and practice my art" was the pledge demanded by Hippocrates of every novitiate of medicine; and "Never act otherwise than so that you can will that your maxim should become a universal law" is the unsurpassable ethical dictum of Immanuel Kant. Inexperienced in the course of the world, incapable of being prepared for all its contingencies, ask yourself: Can I will that my principle of action shall be a universal law for the guidance of every other man? Be not deceived; the study and practice of medicine are not of themselves refining or ennobling to the natural man. Among those who are engaged in the treatment of disease are some of the meanest and cruellest of their race. Quacks and pretenders have been the pests of every age. What elevates and ennobles medicine is Science—that "fair, effusive ray" which Akenside, himself a distinguished physician, invoked as the guiding principle of his life.

"That last best effort of thy skill,
To form the life, and rule the will,
Propitious power! impart;
Teach me to cool my passion's fires,
Make me the judge of my desires,
The master of my heart.

"Raise me above the vulgar's breath,
Pursuit of fortune, fear of death,
And all in life that's mean:
Still true to reason be my plan,
Still let my actions speak the man,
Through every various scene."

It is Knowledge that purifies our nature; it is Science that gives moral dignity and value to our calling. To a worldly-minded man the rewards of medical labour are not worth the toil. The remuneration is not adequate to the anxious and arduous care of professional life; to the struggles against opposition, adversity, and disappointment; to the lack of honours, luxuries, and even comforts. But to a mind imbued with the modest and unselfish spirit of science, the rewards of a good conscience and of a sense of duty properly performed, are sufficient. You, and all of us, are engaged in the pursuit of this science, and in a work of humanity and love. We are inheritors of a useful art, the heirs of a noble learning, the depositories of godlike knowledge. On our efforts, collectively and individually, will depend in a large degree the character and the influence of our art and our science during the coming generations. The way in which we discharge our duties and fulfil our obligations to the profession, to ourselves, and to the world, will influence for good or for evil medical and social life for years to come. Higher than mere earthly honours and earthly dignities, the reward we covet is that of being numbered among the true workers in science and searchers after truth—Science that has revealed the mysteries of our organisation, and eradicated superstition from our minds, extended wide the bounds of knowledge, and put back the limits of the unknown, abridged both space and time, and strengthened our intellectual gaze till we almost pierce the vei of Eternity and realise the Life beyond.

Gentlemen, my task is nearly done. I have only to add my own good wishes to those of my colleagues for your health, happiness, and success.